

surprised if it were eventually shown that wild figs were present throughout the Mediterranean basin and were an article of diet of Paleolithic man, which is quite apart from the question as to where dried figs first became an article of commerce, which may well have been in eastern Mediterranean countries. The genus *Ficus*, as aforesaid, is a large one in modern floras with between five and six hundred species adapted to a variety of habitats, but confined to the warmer parts of the world, although by no means confined to the tropical zone.

The Eocene has yielded a prolific flora in the Mississippi embayment region and in western North America but practically nothing in eastern North America except the isolated lignite basin at Brandon, Vermont,⁵ from which a large number of fruits and seeds have been described. The latter, as well as the present species of *Ficus*, indicate climatic conditions more genial than those indicated by the plants known from the Chesapeake Miocene, and probably somewhat more genial than the corresponding latitudes of the present day, but certainly to be denominated temperate, rather than tropical or even subtropical.

ZOOLOGY.—*New pocket gophers of the genus Thomomys*.¹ E. A. GOLDMAN, Bureau of Biological Survey.

Twenty years have passed since the pocket gophers of the genus *Thomomys* were revised by Bailey (North Amer. Fauna, No. 39: p. 1-136, Nov. 15, 1915). Much additional material has become available for study, and the tendency toward the recognition by name of less and less strongly marked stages of differentiation has resulted in the description of many new forms, especially in the plastic *Thomomys bottae* group.

These extremely sedentary animals inhabit regions of highly diversified topography and climate. Populations consist of colonies which appear to be loosely and more or less intermittently in contact with neighboring colonies, or continuity of range may have become partially or completely interrupted by barriers associated with geological history. In such a setting full play has been given to forces that bring about localized modification, in response to environmental and genetic factors. The result has been the production of a profusion of forms, varying greatly in degree of minor differentiation, and yet maintaining the same pattern of more essential characters with remarkable

⁵ BERRY, E. W. Am Jour. Sci. 47: 211-216. 1919.

¹ Received December 16, 1935.

fidelity. How many should be segregated, and whether particular ones are best designated by binomial or trinomial names are problems depending for ultimate solution on coördinated studies in the field and laboratory.

The criterion—presence or absence (observed or assumed) of individuals possessing intermediate characteristics—for distinguishing between species and subspecies is excellent in theory but not always satisfactorily applicable in practice. Uncertainty must exist where the number of specimens is insufficient to determine the range of individual variation, and where detailed knowledge of field conditions is lacking. A complicating factor is evidence that some forms may intergrade in one region and occur in close juxtaposition without apparent intergradation in another. Until the coördinated field and laboratory studies can be completed the choice of binomial or trinomial names must depend on individual judgment of the evidence in each case.

In the treatment of forms I have endeavored to be as consistent as possible. Experience in classifying pocket gophers, and many other mammals, has shown that trinomials may usually be applied with safety to populations exhibiting differential characters in combinations known to be of subspecific value only, elsewhere in the group.

***Thomomys muralis*, sp. nov.**

Grand Canyon Pocket Gopher

Type.—From lower end of Prospect Valley, Grand Canyon, Hualpai Indian Reservation, Arizona (altitude 4,500 feet), No. 202580, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by E. A. Goldman, October 3, 1913. Original number 22264.

Distribution.—Isolated on terraces along the inner gorge, far below the outer rim in Prospect Valley, a lateral pocket within the Grand Canyon, near the eastern end of the Hualpai Indian Reservation, Arizona.

General characters.—A diminutive, ochraceous buffy species, separated from the ranges of the similarly-colored forms of the region by an interposed arm of the range of the darker subspecies, *Thomomys bottae fulvus*. Differing from *fulvus* in much smaller size, lighter color, and cranial proportions. Very similar in size and color, and bearing a close general resemblance to *Thomomys bottae desertorum*, but geographically isolated, and cranial details indicating no intergradation.

Color.—*Type* (acquiring fresh pelage): Upper parts between light ochraceous buff and ochraceous buff (Ridgway, 1912), purest along sides, thinly mixed with black on top of head and median dorsal area; outer sides of forearms light buff; thighs nearly pure white; under parts overlaid with white; muzzle blackish; ears entirely black along with the black postauricular patches usual in the group; feet and tail white. One of the topotypes is near tawny in general color of upper parts, with under parts overlaid with light ochraceous buff.

Skull.—Very similar in general to that of *T. b. desertorum*, but braincase more rounded and inflated, the basicranial region tending to bulge more prominently posteriorly; frontal region broader; premaxillae usually less extended posteriorly, the ends more nearly conterminous with nasals; upper incisors more strongly recurved (slightly more procumbent in *desertorum*). Compared with that of *T. b. fulvus* the skull is much smaller and more delicate in structure, and differs in detail in about the same characters as form *desertorum*.

Measurements.—*Type*: Total length, 194 mm; tail, 64; hind foot, 26. Two adult female topotypes: 182–190; 57–56; 24.5–25.5, respectively. *Skull* (type): Occipitonasal length, 33.2; zygomatic breadth, 20.5; breadth across squamosals (over mastoids), 17.7; interorbital constriction, 7; length of nasals, 11.3; maxillary toothrow (alveoli), 7.2.

Remarks.—The geographic isolation of *Thomomys muralis* in the Grand Canyon appears to be complete. In places it was found inhabiting strips of soil on ledges only a few feet wide, bounded above and below by vertical cliffs hundreds of feet high.

Specimens examined.—Four, all from the type locality.

***Thomomys bottae desitus*, subsp. nov.**

Big Sandy River Pocket Gopher

Type.—From Big Sandy River, near Owen, Mohave County, Arizona (altitude 2,000 feet). No 227802, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by E. A. Goldman, September 21, 1917. Original number 23332.

Distribution.—Big Sandy River Valley and desert region southeastward to Wickenburg; probably also including the valley of the Bill Williams River, Arizona.

General characters.—Very similar in color and form of cranium to *Thomomys bottae desertorum* of Detrital Valley, but decidedly larger. Differing from *Thomomys bottae chrysonotus* of the Colorado River Indian Reservation, and *Thomomys bottae cervinus* of the Salt River Valley, in smaller size and more tawny coloration. About equal in size to *Thomomys bottae fulvus* of the Mogollon Plateau region, but color much clearer tawny, the back less mixed with black, and cranial details distinctive.

Color.—*Type* (acquiring fresh pelage): Upper parts in general between tawny and ochraceous tawny (Ridgway, 1912), only slightly darkened on top of head and middle of back by black-tipped hairs; outer sides of forearms light ochraceous buff; lower part of sides and thighs whitish; under parts overlaid with white, tinged with buff across throat and chest; muzzle blackish; ears black, except anterior margin which is buffy, the confluent black postauricular markings prominent; feet white; tail buffy above, whitish below, becoming white all around near tip.

Skull.—Essentially like that of *T. b. desertorum*, but much larger. Compared with those of *T. b. chrysonotus* and *T. b. cervinus* the skull is much smaller, and less angular, the supraoccipital region more fully inflated (lacking the deep, median supraoccipital excavation usually present in *chrysonotus* and *cervinus*); audital bullae much smaller. Very similar to that of *T. b. fulvus*, but bullae larger.

Measurements.—*Type*: Total length, 230 mm; tail, 70; hind foot, 30.5. Two adult male topotypes: 219–238; 72–75; 30–31, respectively. An adult female topotype: 210; 62; 29.5. *Skull* (type): Occipitonasal length, 39.5; zygomatic breadth, 24.8; breadth across squamosals (over mastoids), 20; interorbital constriction, 6.8; length of nasals, 14.7; maxillary tooththrow (alveoli), 8.2.

Remarks.—At the type locality *T. b. desitus* inhabits the loose sand along the broad alluvial river bottom, habitat in marked contrast with the harder upland soils perforated by its geographic neighbor, *T. b. desertorum*. The skull of *desitus* indicates close relationship to *fulvus*, and it is obviously a desert representative of the same group.

Specimens examined.—Total number, 22, all from Arizona as follows: Big Sandy River (near Owen), 5; Big Sandy River (Neale's Ranch, at 2,000 feet altitude), 7; Wickenburg, 10.

***Thomomys bottae hualpaiensis*, subsp. nov.**

Hualpai Mountain Pocket Gopher

Type.—From Hualpai Peak, Hualpai Mountains, Mohave County, Arizona (altitude 7,000 feet). No. 227796, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by E. A. Goldman, October 6, 1917. Original number 23351.

Distribution.—Known only from the Hualpai Mountains, Arizona.

General characters.—A light ochraceous buffy subspecies of medium size. Closely allied to *Thomomys bottae desitus*, of the adjoining valley of the Big Sandy River; size about the same, but color distinctly paler; skull differing in detail. Similar in general to *Thomomys bottae desertorum* of the desert plains of the Detrital Valley to the north, but considerably larger and paler colored; cranial characters also distinctive.

Color.—*Type*: Upper parts near light ochraceous buff (Ridgway, 1912), clearest along sides, thinly mixed with black on top of head and over back; forearms and thighs pale ochraceous buff; under parts in general overlaid with pale ochraceous buff, varying to a deeper tint on throat and chest; a pure white spot on chin; muzzle blackish; anterior borders of ears invaded by buffy tone of head; rest of ears and postauricular spots deep black; feet white; tail brownish above on basal two-thirds, whitish below, and white all around on terminal third.

Skull.—Closely resembling that of *T. b. desitus*, but braincase somewhat lower; zygomata usually more slender; nasals more wedge-shaped, narrower posteriorly; auditory bullae slightly smaller, dentition about the same. Compared with that of *T. b. desertorum* the skull differs mainly in decidedly larger size.

Measurements.—*Type*: Total length, 245 mm; tail, 78; hind foot, 31.5. *Skull* (type): Occipitonasal length, 40; zygomatic breadth, 25; breadth across squamosals (over mastoids), 20; interorbital constriction, 6.7; length of nasals, 14.8; maxillary tooththrow (alveoli), 7.8.

Remarks.—This high mountain form most closely resembles its near geographic neighbor, *desitus*, but is distinguished by paler color. It requires

no close comparison with *chrysonotus* which is much larger and still paler, or with *fulvus* which is much darker.

Specimens examined.—Seven, all from the type locality.

***Thomomys bottae internatus*, subsp. nov.**

Upper Arkansas River Valley Pocket Gopher

Type.—From Salida, Chaffee County, Colorado (altitude 7,000 feet). No. 150997, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by Merritt Cary, November 10, 1907. Original number 1247.

Distribution.—High valleys along the eastern side of the Rocky Mountains from the Upper Arkansas River Valley, Colorado, south to north-eastern New Mexico.

General characters.—A large, ochraceous buffy or tawny subspecies. Closely resembling *Thomomys bottae pervagus* of the Upper Rio Grande Valley, New Mexico, but smaller; color very similar; cranial details distinctive. Similar in general to *Thomomys bottae ruidosae* of south-central New Mexico, but smaller; color much lighter, more uniform, not strongly mixed with black as in *ruidosae*; skull also different.

Color.—*Type*: Upper and under parts between ochraceous buff and tawny (Ridgway, 1912), the top of head and back faintly darkened by black-tipped hairs; muzzle blackish, except lips which are whitish; ears encircled by black; feet white; tail brownish above, white below, becoming whitish all around at tip. In some specimens the under parts vary to light ochraceous buff.

Skull.—Very similar to that of *T. b. pervagus*, but smaller and lighter in structure; premaxillae usually less extended posteriorly beyond ends of nasals; audital bullae smaller; dentition lighter. Compared with that of *T. b. ruidosae* the skull is larger and more angular, the temporal ridges more prominent; zygomata less strongly bowed outward posteriorly (widest anteriorly); maxillary arm of zygoma relatively heavier; dentition similar.

Measurements.—*Type*: Total length, 233 mm; tail, 74; hind foot, 32. Five adult female topotypes: 231 (220–239); 76 (73–80); 32 (31–34). *Skull* (type): Occipitonasal length, 39.1; zygomatic breadth, 24.2; breadth across squamosals (over mastoids), 19.7; interorbital constriction, 6.7; length of nasals, 13.9; maxillary toothrow (alveoli), 8.1.

Remarks.—The range of *T. b. internatus* seems to represent an extension of the *T. bottae* group northward along the east side of the Rocky Mountains. In general characters the present form closely approaches *T. b. pervagus* from which, however, it appears to be completely isolated by the high mountains inhabited by *T. fessor* to the westward. Specimens from northeastern New Mexico grade toward *T. b. ruidosae*.

Specimens examined.—Total number, 19, as follows:

COLORADO: Gardner, 2; Salida, 8.

NEW MEXICO: Folsom, 2; Oak Canyon (near Folsom), 2; Sierra Grande, 4; Trinchera Pass (mouth), Colfax County, 1.

Thomomys bottae howelli, subsp. nov.

Grand Junction Pocket Gopher

Type.—From Grand Junction, Mesa County, Colorado (altitude 4,600 feet). No 75684, ♀ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by A. H. Howell, November 7, 1895. Original number 493.

Distribution.—Known only from the type locality in the Grand River Valley, western Colorado.

General characters.—A rather large, pallid subspecies with a broad, flattened cranium. Similar to the palest specimens of *Thomomys bottae aureus* of the San Juan River Valley, southeastern Utah, in color, but under parts more thinly overlaid with buffy white, and cranial characters, especially the broad, flat braincase, distinctive. Approaching *Thomomys bottae osgoodi* of the Fremont River Valley, Utah, in color, but much larger and skull widely different.

Color.—*Type* (winter pelage): Upper parts in general between tulleul buff and pale olive buff (Ridgway, 1912), somewhat darkened on head by a mixture of cinnamon buff and brown; a few inconspicuous dusky-tipped hairs along median line of back; muzzle dusky; ears and postauricular spots deep, contrasting black; under parts thinly overlaid with buffy white, the hairs becoming pure white to roots on inguinal region; thighs pure white to roots all around; feet white; tail buffy whitish, slightly paler below than above.

Skull.—Similar in general to that of *T. b. aureus*, but braincase conspicuously broader and flatter; zygomatics more widely spreading; nasals shorter; premaxillae more attenuate posteriorly; interparietal larger; audital bullae more rounded and fully inflated anteriorly; incisors short, as in *aureus*, but less strongly recurved. Compared with that of *T. b. osgoodi* the skull is much larger, with flatter braincase, shorter nasals, and posteriorly narrower premaxillae.

Measurements.—*Type*: Total length, 219 mm; tail, 71; hind foot, 29. *Skull* (type): Occipitonasal length, 36.8; zygomatic breadth, 23.7; breadth across squamosals (over mastoids), 20; height of braincase (over audital bullae), 12.1; interorbital constriction, 7.1; length of nasals, 10.8; maxillary toothrow (alveoli), 7.4.

Remarks.—*T. b. howelli* is based on a single specimen exhibiting characters which, in view of geographic isolation, seem to warrant subspecific recognition. It is more closely allied to *T. b. aureus* than to any other known form.

Thomomys bottae optabilis, subsp. nov.

Naturita Creek Valley Pocket Gopher

Type.—From Coventry, Naturita Creek Valley, Montrose County, Colorado (altitude 6,500 feet). No. 149962, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by Merritt Cary, July 31, 1907. Original number 1105.

Distribution.—Cultivated flats between Naturita Creek and the San Miguel River, southern Montrose County, Colorado; limits of range unknown.

General characters.—A large, cinnamon-buff subspecies. Size about as in the allied form, *Thomomys bottae aureus* of the San Juan River Valley, southeastern Utah, but color decidedly darker and cranial details, especially the more widely spreading zygomatics, distinctive. Also similar in size to the

higher mountain form, *Thomomys bottae apache*, of the Jicarilla Indian Reservation, northwestern New Mexico, but color richer, more buffy, less dusky, and skull combining differential features.

Color.—*Type* (acquiring summer pelage): Upper parts near cinnamon buff (Ridgway, 1912), purest along sides, finely and evenly mixed with black on top of head and over back; under parts in general overlaid with pinkish buff; hairs on chin and middle of throat pure white to roots; forearms and thighs like under parts; muzzle and middle of face blackish; ears and postauricular areas black; feet white; tail buffy grayish above, somewhat lighter below to near tip which is silvery white all around.

Skull.—Large, but rather light in structure. Similar to that of *T. b. aureus*, but less robust; frontonasal region more depressed along median line; zygomata more slender, but more widely and squarely spreading, the antero-external angle weakly developed; nasals broader posteriorly, less wedge-shaped, the sides more nearly parallel; premaxillae narrower posteriorly; anterior nares higher, the nasals less flattened above; exposed portion of upper incisors longer, more procumbent. Very similar in general to that of *T. b. apache*, but lighter in structure; rostrum more slender; premaxillae narrower; frontal region narrower, more constricted; exposed portion of incisors longer.

Measurements.—*Type*: Total length, 250 mm; tail, 76; hind foot, 32. *Skull* (type): Occipitonasal length, 42.9; zygomatic breadth (at antero-external angle), 27.2; breadth across squamosals (over mastoids), 21.4; interorbital constriction, 6.4; length of nasals, 14.2; maxillary toothrow (alveoli), 8.2.

Remarks.—*T. b. optabilis* inhabits high valley areas, above the range of *T. b. aureus*, along the western side of the Rocky Mountains. In cranial characters it approaches *T. b. apache*, but is readily separated by richer coloration. It requires no close comparison with the pallid subspecies, *T. b. howelli*, of the Grand River Valley.

Specimens examined.—Two, from the type locality.

Thomomys bottae guadalupensis, subsp. nov.

Guadalupe Mountains Pocket Gopher

Type.—From McKittrick Canyon, Guadalupe Mountains, Texas (altitude 7,800 feet). No. 109225, ♂ adult, skin and skull, U.S. National Museum (Biological Survey collection); collected by Vernon Bailey, August 22, 1901. Original number 7821.

Distribution.—Guadalupe Mountains of southern New Mexico and western Texas.

General characters.—A light colored, medium-sized subspecies; pectoral mammae two pairs as usual in forms of *bottae*; very similar in general to *Thomomys bottae texensis* of the Davis Mountains, but color usually lighter; skull more massive, and differing in detail. Contrasting strongly in lighter color, compared with *Thomomys bottae ruidosae* of south central New Mexico, and cranial characters also distinctive.

Color.—*Type* (summer pelage): Upper parts light ochraceous buff (Ridgway, 1912), slightly darkened on top of head and over back by black-tipped hairs; under parts near pale ochraceous salmon, this tone extending upward over lower part of sides and including forearms and thighs; ears black,

invaded by buff anteriorly; black patches behind ears small; muzzle brownish; feet white; tail with a brownish tinge above, white below. Color varying in topotypes to between ochraceous buff and tawny above, and light ochraceous buff below.

Skull.—Similar to that of *T. b. texensis*, but broader and heavier; frontal region broader; nasals broader; premaxillae usually less extended beyond ends of nasals posteriorly; incisors shorter, decurvature about the same. Size of cranium about as in *T. b. ruidosae*, but rostrum and nasals shorter; frontal region broader; zygomatics less strongly bowed outward posteriorly; incisors shorter, decurvature about the same.

Measurements.—*Type*: Total length, 218 mm; tail, 64; hind foot, 29. An adult female topotype: 200; 65; 29. *Skull* (type): Occipitonasal length, 37.1; zygomatic breadth, 23.7; breadth across squamosals (over mastoids), 19.0; interorbital constriction, 6.9; length of nasals, 12.3; maxillary tooth-row (alveoli), 6.9.

Remarks.—*T. b. guadalupensis* is distinguished by pale coloration combined with cranial features unlike those of any of its geographic neighbors. The upper incisors are remarkably short in the older adults, especially males.

Specimens examined.—Total number, 6, as follows:

NEW MEXICO: Guadalupe Mountains (Dog Canyon, 6,800 feet), 2.

TEXAS: Guadalupe Mountains (McKittrick Canyon), 4.

***Thomomys lachuguilla limitaris*, subsp. nov.**

Big Bend Pocket Gopher

Type.—From four miles west of Boquillas, Brewster County, Texas. No. 110339, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by Vernon Bailey, May 28, 1901. Original number 7659.

Distribution.—Northern side of the Rio Grande River Valley, from the "Big Bend" east at least to Devils River, and north to Castle Mountains, Texas.

General characters.—A small, pale buffy subspecies. Closely allied to *Thomomys lachuguilla lachuguilla* of the El Paso region, but still smaller, throat and chest white instead of buffy, and skull differing in detail; mammae, pectoral two pairs, inguinal two pairs, total eight as in *lachuguilla*. Similar in size and color to *Thomomys umbrinus perditus*, a geographic neighbor south of the Rio Grande, but pectoral mammae two pairs instead of one pair, and cranial characters different.

Color.—*Type* (unworn summer pelage): Upper parts near pinkish buff (Ridgway, 1912), the top of head and back somewhat darkened by black-tipped hairs; under parts overlaid with white; forearms, thighs, and feet white; muzzle brownish; ears black, except anterior margins which are buffy; black postauricular patches rather small; tail thinly clothed with whitish hairs above and below.

Skull.—Similar to that of *T. l. lachuguilla* in form, but still smaller, more delicate in structure; zygomatics relatively more slender; premaxillae less extended beyond ends of nasals posteriorly; audital bullae relatively small-

er; dentition lighter; upper incisors decurved about as in *lachuguilla*. Compared with that of *T. u. perditus* the skull is similar in size and delicate structure, but the zygomata are less strongly bowed outward, the sides more nearly parallel; nasals less wedge-shaped, the posterior ends truncate instead of emarginate; lacrymals articulating less broadly with maxillae, as viewed from above; upper incisors more decurved, less procumbent.

Measurements.—*Type*: Total length, 200 mm; tail, 67; hind foot, 27. An adult female topotype: 208; 66; 28. *Skull* (type): Occipitonasal length, 32.5; zygomatic breadth, 20.2; breadth across squamosals (over mastoids), 17; interorbital constriction, 7; length of nasals, 10.8; maxillary toothrow (alveoli), 6.8.

Remarks.—This new form is based upon a few specimens from several localities that exhibit too great a departure in cranial details for satisfactory reference to typical *lachuguilla*. It bears a superficial resemblance to *Thomomys umbrinus perditus*, but a summation of characters indicate specific distinction.

Specimens examined.—Total number, 9, all from Texas, as follows: Boquillas (type locality), 2; Castle Mountains, 1; Comstock, 3; Devils River, 13 miles below Juno, 1; Marathon, 1; Samuels, 19 miles west of Langtry, 1.

***Thomomys lachuguilla confinalis*, subsp. nov.**

Rock Springs Pocket Gopher

Type.—From 35 miles east of Rock Springs, Texas (altitude 2,450 feet). No. 117571, ♂ subadult, skin and skull, U. S. National Museum (Biological Survey collection); collected by Vernon Bailey, July 11, 1902. Original number 7910.

Distribution.—Known only from the type locality in the upper part of the Nueces River Valley, central southern Texas.

General characters.—A small, cinnamon form, with weakly developed skull. Similar in general to *Thomomys lachuguilla limitaris*, but color richer, near cinnamon instead of pinkish buff, and skull more delicate in structure.

Color.—*Type* (acquiring fresh pelage): Head and anterior part of back near cinnamon (Ridgway, 1912), moderately mixed with black; rest of upper parts in worn pelage dull grayish; under parts white, the hairs white to roots on throat, under sides of forearms and inguinal region; forearms tinged with buff along outer sides; muzzle blackish; ears black, becoming buffy near anterior base; forefeet, thighs, and hind feet white; tail light brownish above, white below.

Skull.—Similar in size to that of *T. l. limitaris*, but more slender; zygomata narrower and tending to converge anteriorly, the sides less nearly parallel; premaxillae more prolonged beyond ends of nasals posteriorly; interparietal quadrate and nasals nearly truncate posteriorly as in *limitaris*; palate narrower; dentition lighter; incisors thinner and narrower; maxillary toothrow shorter.

Measurements.—*Type*: Total length, 200 mm; tail, 60; hind foot, 28. *Skull* (type): Occipitonasal length, 32.8, zygomatic breadth, 19.4; breadth across squamosals (over mastoids), 16.5; interorbital constrictions, 6.2; length of nasals, 10.8; maxillary toothrow (alveoli), 5.9.

Remarks.—*T. l. confinalis* is based upon a single specimen representing the extreme eastern limit of the known range of the genus in Texas. The combination of color and cranial details appear to be well beyond the range of individual variation in *T. l. limitaris*, the only form with which it requires close comparison.

***Thomomys pectoralis*, sp. nov.**

Carlsbad Pocket Gopher

Type.—From vicinity of Carlsbad Cave, Carlsbad Cave National Monument, Eddy County, New Mexico. No. 244372, ♂ adult, skin and skull, U. S. National Museum (Biological Survey collection); collected by Vernon Bailey, March 17, 1924. Original number 10222.

Distribution.—Known only from the type locality in the Pecos River Valley, southeastern New Mexico.

General characters.—A small, pinkish buffy species, closely resembling *Thomomys lachuguilla* of the Rio Grande Valley region near El Paso, Texas, but smaller; pectoral mammae apparently limited to a single pair, instead of two pairs as in *lachuguilla*; skull smaller, less massive, and differing in detail. Size much smaller and color paler than in *Thomomys bottae guadalupensis* of the neighboring Guadalupe Mountains; pectoral mammae apparently one pair, instead of two pairs as in *guadalupensis*; cranial characters quite different.

Color.—*Type.* Upper parts near pinkish buff (Ridgway, 1912), slightly darkened on head and over dorsum by admixture of black-tipped hairs; under parts overlaid with pinkish buff, extending upward to include outer sides of forearms and thighs; muzzle blackish; ears encircled by black; feet white; tail brownish above, white below.

Skull.—Similar in general to that of *T. lachuguilla*, but smaller, less massive; rostrum narrower; zygomata more slender; interparietal more triangular; premaxillae less extended beyond ends of nasals posteriorly; bullae smaller; upper incisors thinner and slightly more procumbent. Compared with that of *T. b. guadelupensis* the skull is smaller, less angular, and lighter in structure; interparietal more triangular; bullae more smoothly rounded; dentition similar.

Measurements.—*Type.* Total length, 186 mm; tail, 48; hind foot, 25. An adult female topotype: 188; 55; 26. *Skull* (type): Occipitonasal length, 34; zygomatic breadth, 21.8; breadth across squamosals (over mastoids), 18; interorbital constriction, 6.7; length of nasals, 11.3; maxillary toothrow (alveoli), 6.8.

Remarks.—This little pocket gopher presents a departure from the neighboring forms in the apparent reduction of the pectoral mammae to a single pair. At least I have been able to find only one pair in a topotype in which the mammae had been functional and are clearly visible. In this character the present form agrees with *Thomomys umbrinus* of Mexico, but differs in important cranial features and requires no close comparison.

Specimens examined.—Three, all from the type locality.